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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,521	10/07/2005	Vincent Grainer	RN03042	2573

Rhodia Inc.  
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7590

11/16/2007

EXAMINER
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NILAND, PATRICK DENNIS

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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11/16/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/552,521

Applicant(s)

GRAINER ET AL.

Examiner

Patrick D. Niland

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-22, 29 and 30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-22 and 29-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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1. The amendment of 9/4/07 has been entered. Claims 15-22 and 29-30 are pending.
2. The specification (including the abstract and claims), and any amendments for applications, except as provided for in 37 CFR 1.821 through 1.825, must have text written plainly and legibly either by a typewriter or machine printer in a nonscript type font (e.g., Arial, Times Roman, or Courier, preferably a font size of 12) lettering style having capital letters which should be at least 0.3175 cm. (0.125 inch) high, but may be no smaller than 0.21 cm. (0.08 inch) high (e.g., a font size of 6) in portrait orientation and presented in a form having sufficient clarity and contrast between the paper and the writing thereon to permit the direct reproduction of readily legible copies in any number by use of photographic, electrostatic, photo-offset, and microfilming processes and electronic capture by use of digital imaging and optical character recognition; and only a single column of text. See 37 CFR 1.52(a) and (b).

The application papers of the amendment of 9/4/07 are objected to because the formula of surfactant (b) contains the subscripts of the top O attached to the P, the superscript of the top X, the subscripts of both ethylene oxide segments, and the subscript of the top R all of which are illegible in the amendment of 9/4/07. There are also unpaired parenthesis.

A legible substitute specification in compliance with 37 CFR 1.52(a) and (b) and 1.125 is required.

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re*

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*Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 15-22 and 29-30 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 10-22, particularly 18 of copending Application No. 10/552520. Although the conflicting claims are not identical, they are not patentably distinct from each other because, although the claims differ in scope somewhat they overlap to the extent that the instantly claimed inventions would have been obvious over the copending claim 18 in view of the other process claims' recited composition limitations. It is noted that the copending claims do not recite particle size nor polydispersities. However, claim 15-18 for example recite the instantly claimed isocyanates and their viscosities and the use of water with the instantly claimed pH and the instantly claimed phosphorus based surfactant. It is therefore expected that the particles of the copending claims will necessarily have particle sizes within the instantly claimed very broad size ranges and polydispersities since the claims use the same polyisocyanates, surfactants, and pH and the claimed liquid polyisocyanates of the pending claims are those of the instant claims with the liquid nature thereof being a large factor in dispersibility as well as particle size resulting therefrom. It is not seen that the claimed polydispersity is not typical of dispersing liquids of the claimed viscosities of the copending claims with the copending application claims' surfactants in water of the pH of the copending application claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

5. Claims 15-22 and 29-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. Claims 15, as amended, and claim 30 recite “for a polydispersity index of not more than 1.5, and optionally not more than 1.3”. The grammar of the claim appears to make it unclear as it is unclear how isocyanate composition (a) can be “for a polydispersity index of not more than 1.5, and optionally not more than 1.3”.

Claims 16-22 and 29 depend ultimately from claim 15 and therefore also contain this issue.

B. It is unclear what is intended by “chosen from aliphatic radicals with no aromatic nucleus, substituted or unsubstituted, optionally alkyls;”, particularly “with no aromatic nucleus, substituted or unsubstituted, optionally alkyls” of claims 15 and 30. First, it is unclear whether “substituted or unsubstituted” is intended to modify “aromatic nucleus” or “alkyls”. This is brought about by the applicant’s representative’s arguments regarding the alleged enablement of “substituted” in part and the grammar of the claim in part. Secondly, it is unclear from the grammar of the claim, what is excluded by “with no”. It is unclear if only aromatic nucleus containing aliphatic radicals are excluded or both aromatic nucleus containing aliphatic radicals and alkyls are excluded. Thirdly, it is unclear what is meant by “substituted or unsubstituted, optionally alkyls” in the event substituted or unsubstituted is to modify “optionally alkyls”. Fourthly, it is unclear what the “optional” thing is to be other than alkyls or what “optionally alkyls” is intended to mean otherwise.

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Claims 16-22 and 29 depend ultimately from claim 15 and therefore also contain this issue.

C. It is further unclear what is meant by “chosen from aliphatic radicals with no aromatic nucleus, substituted or unsubstituted, optionally alkyls; and an aqueous phase...” of claims 15 and 30. This appears to have the format of a Markush group given “chosen from” and the “and” prior to “an aqueous phase...”. However, if a Markush group is intended by this language, it is an improper Markush group since “an aqueous phase” is not a potential  $R_1$  or  $R_2$ . Since the apparent Markush members, e.g. “aliphatic radicals with no aromatic nucleus, substituted or unsubstituted, optionally alkyls;” do not recite “and” or “or” and recite no other closed language, it is unclear what else is intended to be encompassed by the recited Markush language. See MPEP 73.05(h) Alternative Limitations I. MARKUSH GROUPS.

Claims 16-22 and 29 depend ultimately from claim 15 and therefore also contain this issue.

D. In the event the preamble is given weight in a determination of patentability, it is unclear what is meant by “for adhesive”. In other words, “for adhesive” what? Is the composition to be used for adhesive bonding, for addition to a final adhesive, or for something else?

E. It is unclear what is required by “for successive or simultaneous addition”. Is the composition required to be added to something else by this limitation and if so what?

F. The formula of surfactant (b) of claims 15 and 30, and therefore all of the claims, is unclear in that the subscripts of the top O attached to the P, the superscript of the top X, the subscripts of both ethylene oxide segments, and the subscript of the top R are all illegible in the amendment. There are also unpaired parenthesis which contribute to the lack of clarity since it is unclear what the unpaired parenthesis are intended to mean.

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G. Claim 29 recites a viscosity of “not more than 1400” but does not recite the units. It is unclear what units are to modify 1400.

6. Claims 15-22 and 29-30 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the disclosed substituents, does not reasonably provide enablement for all of the encompassed substituents by the claimed recitation of “substituted” in claim 15. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

A. The instant claims recite “substituted” without specifying what the substituents are. There are an infinite number of potential substituents many of which are not expected to function according to the instantly claimed invention. It would require undue experimentation to determine how to employ each of these substituents and to determine whether or not they will function in the instantly claimed invention.

“Substituted” encompasses all known and yet to be discovered substituents. This is an infinite sized list. There is no general guidance as to how to choose substituents which will function in the instant invention from this list nor how to attach the various moieties encompassed by “substituted”. The instant specification gives no guidance as to how to choose the substituents encompassed by the instant claims which will function and those which will not function in the instant claims. It requires an infinite amount of experimentation to determine how to attach most of the moieties encompassed by the instant claims and another infinite amount of experimentation to determine which attached moieties will function in the instant invention. This is undue in that it is impossible to perform. The fact that the chemical arts are

unpredictable would require significant guidance from the specification for the ordinary skilled artisan to be able to make substitutions which would function as required of the instant invention, i.e. one cannot predict with any degree of accuracy which substituents will and will not function according to the instant specification without testing them, e.g. testing an infinite sized list of substituents. The instant specification thus does not meet the test for enablement of the full scope of the instantly claimed "substituted" moieties as required by *In re Wands* at MPEP 2164.01 [R-5] Test of Enablement.

Applicant's argument that the examiner admits that some of the substituents are enabled and page 12, lines 26-30 enables some substituents makes the term "substituted" sufficiently enabling in the manner disclosed at page 12, lines 26-30 of the specification is not persuasive since "substituted" as claimed is not limited to the manner disclosed at page 12, lines 26-30 of the specification. The full scope of the term is not enabled for the reasons stated above. This rejection is maintained for the reasons stated above and because, though it is unclear what "substituted" applies to in the newly amended claims as stated above, the applicant's arguments are such that the term may be intended to apply in the same manner as was rejected above.

7. Claims 15-22 and 29-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

A. The formula of surfactant (b) of claims 15 and 30, and therefore all of the claims, is unclear in that the subscripts of the top O attached to the P, the superscript of the top X, the subscripts of



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both ethylene oxide segments, and the subscript of the top R are all illegible in the amendment.

To the extent that this introduces compounds into the claims that are not supported by the originally filed specification, the illegible formulae are new matter.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 15-22 and 29-30 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent Application Publication No. 2001/0021746 A1 Nabavi et al..

The instant claims are directed to compositions per se, not their methods of use. The prior art emulsions have the ability to be used for adhesives and the ability to be used for successive or simultaneous addition to something necessarily and inherently. The applicant's representative's argument ignores the fact that coatings must adhere to one substrate and by this nature are capable of adhering to two substrates necessarily and inherently. Anyone who has painted and allowed a wet paint brush to dry while on some substrate knows this fact. If the paint can adhere to wood for example, there is no reason it cannot adhere two pieces of wood together. It is noted that NCO reacts with OH and other active H groups. Thus, the instantly claimed isocyanate emulsion will readily adhere any substrates having OH groups such as

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hydroxyl cellulose via covalent bonding. Furthermore, the applicant's representative's arguments carry only the weight of attorney argument. There is no probative evidence that the prior art compositions do not have the ability to be used for adhesives and the ability to be used for successive or simultaneous addition to something necessarily and inherently. The examiner generally disagrees with the applicant's representative's characterizations of the distinctions between coatings and adhesives and specifically disagrees with respect to the instant application of prior art therefore.

Nabavi discloses the instantly claimed invention at the abstract, which encompasses all free NCO groups, sections [0051]-[0059] which encompasses the instantly claimed surfactant, sections [0108]-[0124] of which [0110] encompasses the instantly claimed viscosities and the identities of the specific isocyanates have the instantly claimed NCO contents, e.g. the exemplified isocyanates have the instantly claimed NCO contents. The reference disclosure at section [0110] regarding lowering viscosity and reducing solvent content by using trimers or dimers discussed therein and the viscosity requirements of this section coupled with the ordinary skilled artisan's understanding of how viscosity is affected by molecular weight by definition of "viscosity average molecular weight" is such that the ordinary skilled artisan would have envisioned the instant claims 16-17 and 20-22 from the reference's disclosure at section [0110]. It is not seen that the compositions of the reference contain any excess acid nor base and are therefore expected to have pHs in the broad range of the instant claim 26, particularly if they are used as coatings, which cannot degrade the substrates they are applied to. The polyols of section [0011] fall within the scope of the instant claim 24. The coatings adhere to substrates which meets the requirement of the instant claims. The instantly claimed isocyanate viscosities are

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disclosed at section [0110]. The instantly claimed particle sizes are disclosed at section [0110]. The instantly claimed pH is disclosed at section [0157]. The instantly claimed "emulsion" is met at section [0010] and section [0151]. Sections [0072], [0172]-[0173], and [0176]-[0179] appear to encompass the instantly claimed "for a polydispersity index...not more than 1.3" though the examiner remains uncertain what exactly is required by this unusual language. It is therefore not seen that the emulsions disclosed by the reference containing the instantly claimed isocyanates, emulsifiers, water, pH, and made by the processes of the reference, such as sections [00154]-[0157] do not necessarily and inherently possess the instantly claimed parameters related to particle size and polydispersity necessarily and inherently. See MPEP 2112.

The applicant's arguments have been fully considered but are not persuasive for the reasons stated above.

11. Claims 15-22 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication No. 2001/0021746 A1 Nabavi et al..

The instant claims are directed to compositions per se, not their methods of use. The prior art emulsions have the ability to be used for adhesives and the ability to be used for successive or simultaneous addition to something necessarily and inherently. The applicant's representative's argument ignores the fact that coatings must adhere to one substrate and by this nature are capable of adhering to two substrates necessarily and inherently. Anyone who has painted and allowed a wet paint brush to dry while on some substrate knows this fact. If the paint can adhere to wood for example, there is no reason it cannot adhere two pieces of wood together. It is noted that NCO reacts with OH and other active H groups. Thus, the instantly claimed isocyanate emulsion will readily adhere any substrates having OH groups such as

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Nabavi discloses the instantly claimed invention at the abstract, which encompasses all free NCO groups, sections [0051]-[0059] which encompasses the instantly claimed surfactant, sections [0108]-[0124] of which [0110] encompasses the instantly claimed viscosities and the identities of the specific isocyanates have the instantly claimed NCO contents, e.g. the exemplified isocyanates have the instantly claimed NCO contents. The reference disclosure at section [0110] regarding lowering viscosity and reducing solvent content by using trimers or dimers discussed therein and the viscosity requirements of this section coupled with the ordinary skilled artisan's understanding of how viscosity is affected by molecular weight by definition of "viscosity average molecular weight" is such that the ordinary skilled artisan would have envisioned the instant claims 16-17 and 20-22 from the reference's disclosure at section [0110]. It is not seen that the compositions of the reference contain any excess acid nor base and are therefore expected to have pHs in the broad range of the instant claim 26, particularly if they are used as coatings, which cannot degrade the substrates they are applied to. The polyols of section [0011] fall within the scope of the instant claim 24. The coatings adhere to substrates which meets the requirement of the instant claims. The instantly claimed isocyanate viscosities are

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It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the instantly claimed combinations of ingredients from the disclosure of Nabavi because they are encompassed by Nabavi and would have been expected to give the coating properties disclosed by Nabavi.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

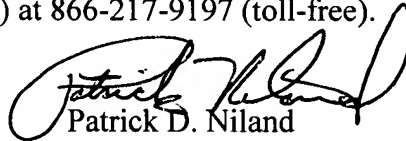
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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick D. Niland whose telephone number is 571-272-1121. The examiner can normally be reached on Monday to Thursday from 10 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Patrick D. Niland  
Primary Examiner  
Art Unit 1714